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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,534	12/19/2003	Brett Rimmer	56.0719	1533

27452 7590 11/29/2006

SCHLUMBERGER TECHNOLOGY CORPORATION  
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EXAMINER

FIGUEROA, JOHN J

ART UNIT PAPER NUMBER

1712

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/707,534

Applicant(s)

RIMMER ET AL.

Examiner

John J. Figueroa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1, and claims 3-15 that depend therefrom, are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the slowly release of a chemical in an encapsulated polymer or for delivering a scale inhibitor in the form of a porous ceramic particle, it does not reasonably provide enablement for any chemical in a "solid slow-release form."

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Paragraphs 20-22 of the specification discuss providing a chemical into a wellbore via its encapsulation within a polymer, whereas paragraph 23 discloses that a scale inhibitor may be delivered in the form of a porous ceramic particle. The specification does not provide sufficient disclosure to enable the method of delivery recited in the claims to comprise providing a chemical in any "solid slow-release form."

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Number (USPN) 6,655,475 B1 to Wald, hereinafter 'Wald', in view of USPN 4,790,386 to Johnson, hereinafter 'Johnson'.

Claim 1 (the sole independent claim) has been amended to limit the container to be a meshed or mesh-like basket.

Wald discloses a method for treating a well bore by using a treatment composition enclosed in a container deposited in a well through a drill string attached to a swivel (providing anchoring means for the container when connected to cable wire) and a rotary bit; said composition, when coming into contact with drilling mud and/or water (produced fluids), forms a solution that has the ability to circulate and treat the entire well bore. (Abstract; col. 1, lines 41-63; col. 2, lines 9-49; col. 5, lines 7-23 and lines 33-67; Figures 1 and 2) The container enclosing the composition is partially soluble and can be sized for placement in an elongated conduit inserted into a subterranean well, wherein said composition can be an anti-corrosive treatment in liquid or in particulate form. (Col. 1, line 64 to col. 2, lines 50-59)

Wald further discloses that the container may be rigid or flexible, can be partially soluble in the drilling mud (slow release of treatment composition) and may be formed with openings or pores filled with soluble plugs that are soluble in the mud thereby permitting flow of production fluids through the container upon contact with the enclosed liquid or particulate (encapsulated) composition. (Col. 2, line 41 to col. 3, line 7; col. 4, lines 25-30) The container may be introduced by pumping it or by using a cable/wireline that goes down through the drill string so that it can be located at, e.g., the bottom of a well bore. (Col. 4, lines 31-48)

Wald does not disclose the container being meshed or mesh-like.

Johnson teaches a method of delivering a treatment composition ("chemical") into a well bore containing corrosive fluids (path of production fluids), said method including providing a container ("basket") loaded with the treatment composition, lowering the container into the well's production tubing and exposing the treatment composition to the production fluids at one end of the container (opening); wherein the treatment composition is gradually released into the well bore at a desired rate. (Abstract; col. 2, lines 38-51; col. 5, line 59 to col. 6, line 27; col. 6, lines 33-38) The treatment composition container can be lowered into place at, e.g., the bottom of a well bore, and thus directly into the production fluids, by a wire line (suspended to a hanger/anchor). (Figure 1; col. 3, lines 33-51 and 55-65)

Johnson also teaches that the treatment composition can be any chemical suitable for inhibiting scale, wax and/or corrosion of metal surfaces in the well bore. (Col. 4, lines 16-20) For example, the composition that is gradually introduced into the

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well can be a semi-solid composition, a polymer solution and/or an inhibitor; wherein said polymer solution can comprise an inhibitor and said inhibitor can be a polyacrylate, poly(meth)acrylate, polyacrylamide or alkaline salts of phosphate (includes organic and inorganic), phosphorate, acrylates (a carboxylate) or sulfonate. (Col. 4, lines 25-30; col. 6, lines 22-32)

Johnson further teaches that the top of the container can comprise an open-mesh screen if necessary to restrain the movement of the treatment composition from the top of the container. (Col. 5, lines 21-27; col. 6, lines 33-42) The open mesh screen can be attached over an opening/aperture of the container if necessary to restrain the treatment composition against its movement out through an opening or aperture of the container. (Col. 5, lines 20-27)

Johnson further teaches that among the well-known scale inhibitors and anti-corrosion chemicals are those comprising alkaline salts of phosphate, phosphorates, acrylates, sulfonates and polymeric acrylic solutions.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to attach a mesh screen over at least an aperture or opening of the container in Wald. It would have been obvious to do so to prevent spilling of the treatment fluid composition of scale/corrosion inhibitors (such as those disclosed in Johnson) and/or to reduce the flow rate of the fluid composition to attain a more effective treatment distribution of the well bore's metal surfaces as taught by Johnson.

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As to the container potentially being reused or refilled (claims 1 and 8), although Wald does not explicitly provide examples of reusing (or refilling the container during a single use) when providing the chemical compound/composition into a well bore, Wald does not disclose the container being completely biodegradable, the container's ineffectiveness after only one use or inability to refill during use. Hence, it would have been obvious to one skilled in the oil drilling/well treatment art to reuse or refill Wald's container. One in the art would have been motivated to do so because it would be cost-effective and efficient to e.g., refill a container during its use to provide a chemical to a well bore than to purchase, and have deliver to the drilling site, a new container to deliver the chemical that is introduced into said well bore.

Thus, the claims are unpatentable over Wald and Johnson.

5. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable USPN 4,846,279 to Bruce, hereinafter 'Bruce' in view of Johnson.

Bruce discloses treating a well bore by locating a canister at the bottom portion of a well bore, said canister (container) having a bladder that includes a chemical treating composition that flows into the production fluid by pressure differentiation, wherein the flow rate of delivery of the composition into the well can be controlled and predetermined. (Abstract; Figures 1 and 2; col. 2, lines 18-30 and 42-54) The canister with the bladder filled with a liquid scale inhibitor fluid can be lowered into the well bore's production zone by using a wire line, said canister made from stainless steel, titanium or similar materials that can withstand the physical stresses to which it is

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exposed and resist attack from corrosive well fluids (so that it can be reused) and thus perform satisfactorily during its entire design life. (Col. 2, lines 51-54; Col. 3, lines 4-40; col. 4, lines 40-59)

Bruce further discloses that the bottom of the canister may contain *at least one* aperture, on its bottom wall or on its side, through which the well fluid can enter thereby, subjecting the inner bladder to the fluid pressure existing at the bottom portion of the well. (Col. 3, lines 41-62) The flow rate can also be severely restricted allowing for the canister to be located at a higher point in the well bore and thus, anchored alongside the sidewall of the well bore. (Col. 4, lines 60 to col. 5, line 2; col. 5, line 55 to col. 6, line 25; Fig. 2)

Bruce does not disclose the container being meshed or mesh-like.

Johnson was discussed above in the immediately preceding paragraph and all the arguments therein are incorporated herein.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to attach a mesh screen over at least an aperture or opening of the canister in Bruce. It would have been obvious to do so to prevent spilling of the treatment fluid composition of scale/corrosion inhibitors (such as those disclosed in Johnson) and/or to reduce the flow rate of the fluid composition to attain a more effective treatment distribution of the well bore's metal surfaces as taught by Johnson.

As to the container being reused or refilled (claims 1 and 8), although Bruce does not explicitly provide examples of reusing (or refilling the canister during a single use) when providing the chemical compound/composition into a wellbore, Bruce does not



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disclose the steel or titanium canister's ineffectiveness after only one use or inability to refill during use. Hence, it would have been obvious to one skilled in the oil drilling/well treatment art to reuse or refill Bruce's steel or titanium canister. One in the art would have been motivated to do so because it would be cost-effective and efficient to e.g., refill a steel or titanium container during its use to provide a chemical to a well bore than to purchase, and have deliver to the drilling site, a new, expensive steel or titanium canister to deliver the chemical that is introduced into said well bore.

Thus, the claims are unpatentable over Bruce and Johnson.

6. Claims 1, 2, 4 and 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 3,104,716 to Burkhardt et al. (hereinafter 'Burkhardt') in view of Johnson.

Burkhardt discloses a method for delivering into a well bore a treating liquid, such as a liquid corrosive inhibitor (chemical), at a low amount at a time from container 37 having inlet 40 (opening) from which said inhibitor can be ejected from container 37 into well bore 10; said well bore 10 comprising: production tubing 16 that extends to near the bottom of well bore 10, landing nipple 18 attached to production tubing 16, packer 22, cylindrical support 44 and extension tubing 20 (providing anchoring means for the container). (Col. 1, lines 23-45; col. 2, lines 1-13 and 18-24; col. 3, lines 51-62; Figures 1 and 5-6)

Burkhardt also discloses that extension tubing 20 (including the container) may be lowered by conventional means, such as a wire line attachable to fishing neck 26,

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and that the bottom of production tubing 16 is provided with plug 38 to form the reservoir of container 37 which encloses the corrosion inhibitor. (Col. 2, lines 14-17 and 34-38; col. 3, lines 51-54)

Burkhardt does not disclose the container being meshed or mesh-like.

Johnson was discussed above in the immediately preceding paragraph and all the arguments therein are incorporated herein.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to attach a mesh screen over at least an aperture or opening of Burkhardt's container. It would have been obvious to do so to prevent spilling of the treatment fluid composition of scale/corrosion inhibitors (such as those disclosed in Johnson) and/or to reduce the flow rate of the fluid composition to attain a more effective treatment distribution of the well bore's metal surfaces as taught by Johnson.

Regarding reusing (or refilling) the container (claims 1 and 8), although Burkhardt does not explicitly provide examples of reusing the container to provide a chemical compound/composition into the well bore, Burkhardt does not disclose the container being biodegradable or of the container's ineffectiveness after only one use. Hence, it would have been obvious to one skilled in the oil drilling/well treatment art to reuse Burkhardt's sophisticated container/apparatus. One in the art would have been motivated to do so because it would be cost-effective and efficient to reuse Burkhardt's container/apparatus to provide a chemical to a well bore than to purchase, and have

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deliver to the drilling site, a new container/apparatus each and every time a chemical is to be introduced into said well bore.

Thus, the claims are unpatentable over Burkhardt and Johnson.

7. Claims 1 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,387,986 B1 to Moradi, hereinafter 'Moradi', and either Wald, Bruce or Burkhardt, in view of Johnson, as applied above to claim 1 in paragraphs 7-9.

Moradi discloses encapsulated crosslinking agents and gel-forming compositions to be utilized in oil-field applications. (Abstract; col. 2, lines 23-26) The preferred polymers taught by Moradi to be used for encapsulation are homopolymers and copolymers of glycolate and lactate, polycarbonates, polyanhydrides, polyorthoesters and polyphosphacenes; wherein the most preferred is poly(lactic acid-co-glycolic acid). (Col. 3, lines 12-17) According to Moradi, these polymers are preferable because they can degrade over a period of time to release the crosslinking agent at a selected gradual rate. (Col. 3, lines 7-10)

Moradi does not expressly disclose a method for delivering the composition into a well bore.

Wald, Bruce or Burkhardt, in view of Johnson were discussed above in paragraphs #7-9 and the arguments therein are incorporated herein in their entirety.

Particularly, although Johnson does not disclose the chemical compound/composition released from the container into the well to be encapsulated in a polymer, Johnson does teach an effective method of gradually delivering a chemical

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compound or composition (chemical), such as a semi-solid or polymer composition, into a well bore at a desired rate of release of the chemical into the production fluid over a predetermined amount of time. (See, e.g. Johnson, col. 5, lines 28-43)

Accordingly, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the method of delivery a treatment composition taught by Wald (or Bruce or Burkhardt) and Johnson to deliver Moradi's encapsulated polymer composition into a well bore production tubing. It would have been obvious to skilled in the art to do so to effectively reduce the scaling/corrosion of the well bore production equipment/reservoir by the optimal, inexpensive and simple delivery of Moradi's encapsulated polymer composition over a preferred, gradual length of time as taught by Wald (or Bruce or Burkhardt) and Johnson.

Thus, the claims as amended are unpatentable over Moradi, Wald (or Bruce or Burkhardt) and Johnson.

### ***Conclusion***

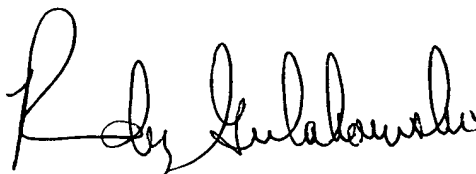
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Figueroa whose telephone number is (571) 272-8916. The examiner can normally be reached on Mon-Thurs & alt. Fri 8:00-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJF/RAG



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